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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,677	05/21/2004	Carles Borrego Bel	LEAR 8153ES PUSA	3676
34007	7590	02/06/2008		
BROOKS KUSHMAN P.C. / LEAR CORPORATION 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER AMRANY, ADI	
			ART UNIT 2836	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/709,677	BORREGO BEL ET AL.	
	Examiner	Art Unit	
	ADI AMRANY	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. A substitute specification is required pursuant to 37 CFR 1.125(a) because the current version contains several amendments while not removing necessary material. For example, the specification was amended on January 12, 2007 to insert paragraph [0000a], in which applicants claim §371 priority to PCT/ES01/00462. Applicants then amended the specification on July 18, 2007, to state that the pending application is a continuation of the PCT application (see also petition for review – 7/18/07). This specification amendment, however, did not remove paragraph [0000a].

Further, applicants' help is requested in reviewing the remaining portions of the specification (original and amended) to ensure consistency and proper grammar.

2. The attempt to incorporate subject matter into this application by reference to numerous foreign and domestic patents (see paragraphs 12-13) is ineffective because these references were not included on an IDS.

3. It is also noted that applicants have not submitted a copy of the international search report for the PCT application.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive

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characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 20-21, 28-31 and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Frey (US 6,232,674).

With respect to claim 20, Frey discloses a system for protecting against short circuit in electric power distribution architecture (fig 1; col. 2, lines 41-45) having a first battery assembly for generating a first voltage level (item 16; col. 2, lines 45-60), a second battery assembly (18; col. 4, lines 17-29) for generating a second voltage level that is substantially higher than the first voltage level, a converter coupled between the first and second battery assemblies (item 13), and at least one power distribution unit (item 17), the system comprising:

a module SMM (items 11-12; col. 2, line 61 to col. 3, line 21) operably coupled to:

the converter having an input coupled to the second battery assembly (item 30a) and an output coupled to the first battery assembly (item 30), wherein the converter is adapted to generate a first voltage signal (input to port 28) indicative of an amount of voltage measured at the output that is compared to a first predetermined voltage range of the first voltage level (col. 3, lines 25-53) and to generate a second voltage signal (input to port 27); and

at least one power distribution unit operable coupled to at least one load (col. 2, lines 51-57);

wherein the module SMM is adapted to assess a state of the DC/DC converter and to control the power distribution unit to connect/disconnect the loads in response to the first and second voltage signals (col. 4, lines 31-47).

With respect to claim 21, Frey discloses the module SMM (item 12) is adapted to measure a voltage across the battery for comparison to a predefined voltage level in response to receiving at least one of the first voltage signal and the second voltage signal (col. 3, lines 25-53; col. 5, line 1 to col. 6, line 4). Frey and claim 20 both recite that the first battery is directly connected to the input of the converter. Therefore, sensing the input voltage of the converter is exactly the same as sensing the output of the first battery. Applicants' battery assembly is not interpreted to include more than one battery, as there is no support in the specification. The Frey battery assembly is interpreted as the battery and its connecting wires/cables.

With respect to claims 28-29, Frey discloses the module SMM is coupled to at least one controller via a shared communication line (port 31; col. 3, lines 8-21) and

coupled to the converter via a dedicated communication line (through input/output ports 27-29) to transmit the first (U30) and second (U30a) voltage signals.

With respect to claims 30-31 and 38-39, Frey discloses the apparatus necessary to complete the recited methods, as discussed above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22-27 and 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frey in view of Turner (US 6,646,845).

With respect to claim 22, Frey discloses measuring the voltage across the first battery and disconnecting the loads when an undervoltage is detected (col. 4, lines 41-47), but does not expressly disclose deriving the voltage from measuring the current of the first battery. Turner discloses a system for protecting against short circuits (fig 1; col. 4, lines 1-12; col. 6, lines 18-22) comprising a first battery assembly (item 12; col. 6, lines 43-46) and a module SMM (item 26; col. 7, lines 14-22, 27-29), wherein the module SMM is adapted to measure an input current across the first battery to determine that the measured voltage across the first battery is below the predefined voltage level (col. 4, lines 35-46; col. 7, lines 30-46; col. 8, lines 5-10).

Frey and Turner are analogous because they are from the same field of endeavor, namely short-circuit protection systems. At the time of the invention by

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applicants, it would have been obvious to one skilled in the art to combine the voltage measuring system disclosed in Frey with the current measuring system disclosed in Turner in order to more accurately determine the battery status (Turner, col. 8:5-10).

With respect to claim 23, both Frey (col. 4, lines 41-47) and Turner (col. 4, lines 35-46; col. 6, lines 18-31, 46-55) disclose the module SMM is adapted to control the PDU to selectively disconnect the loads in response to the module SMM determining that the measured input current is above the predetermined load current. The relationship between current and voltage (higher current results in faster voltage drop) is well known.

With respect to claim 24, Frey discloses that the module SMM controls the second battery assembly to disconnect itself (col. 4, lines 48-54) in response to determining that the measured input current is above the predetermined load current after the module SMM disconnects the loads (col. 4, lines 41-47). Frey discloses that the loads are connected in parallel to the first battery (items 16, 17). By disconnecting the two batteries from each other (control device 10a), Frey inherently disconnects the second battery from the load (17).

With respect to claim 25, it would be obvious to one skilled in the art that the Frey system reconnects the loads when the emergency operation is over (col. 4, lines 55-67). Frey and Turner both continuously measure battery voltage and current to detect the next emergency or short-circuit. It is inherent that both Frey and Turner will continue to measure the input current after at least one load is reconnected.

With respect to claim 26, Turner discloses measuring the voltage across each load (col. 6, lines 56-67).

With respect to claim 27, Turner discloses that the measured voltage across the load is one of the factors in determining whether to disconnect the load (col. 6, lines 43-67).

With respect to claims 32-37, Frey and Turner disclose the apparatus necessary to complete the recited methods, as discussed above.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Applicants are also requested to review all of the references cited during the previous office actions, including those enclosed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADI AMRANY whose telephone number is (571)272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Sherry/
Supervisory Patent Examiner, Art Unit 2836

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